

REMARKS

Claims 33-37 and 45-57 remain in this application. Claims 33 and 48 have been amended. Claims 54-57 have been added. Support for the amendment to the claims can be found in the original specification and in the drawings.

Reconsideration of this application is respectfully requested.

Claim Rejections – 35 U.S.C. § 102(b)

Claims 33, 34, 37, 48 and 49 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hasegawa *et al.* (U.S. Patent No. 5,271,788) (Evidence document Yamagami *et al.* U.S. Patent No. 5,316,645).

Claim 33

Claim 33 recites a method for forming a layer on a wafer, the method comprising: placing the wafer onto a pedestal within a chamber, wherein the chamber includes an isolation ring positioned around a periphery of the pedestal; biasing the pedestal with a first bias power; biasing a target of the chamber with a second bias power; and biasing a coil of the chamber with a third bias power, wherein the isolation ring electrically decouples the first bias power from the second and third bias powers, and wherein a top portion of the isolation ring that is exposed to a chamber environment during forming the layer is coated with a conductive material prior to forming the layer on the wafer, and further wherein biasing the coil with the third bias power includes selectively powering the coil at least once during formation of the layer with a bias waveform to tune stress characteristics of the layer to have at least one portion with a tensile different from another portion.

Claim 48

Claim 48 recites a method for forming a layer on a wafer, the method comprising: placing the wafer within a sputtering chamber, wherein the chamber includes an isolation ring, the isolation ring having a top portion exposed to an environment of the sputtering chamber coated with a conductive material and having a bottom portion for contacting with the wafer and isolating the wafer from portions of the sputtering chamber; biasing a coil of the chamber with a bias power, wherein biasing the coil with the bias power includes selectively powering the coil at

least once during formation of the layer with a bias waveform to tune stress characteristics of the layer to have at least one portion with a tensile different from another portion; and biasing a sputtering target for depositing material from a the sputtering target onto the wafer to form the layer.

The PTO provides in MPEP § 2131 that

"[t]o anticipate a claim, the reference must teach every element of the claim...."

Therefore, with respect to claims 33, to sustain this rejection the Hasegawa *et al.* reference must contain all of the above claimed elements of the respective claim. However, contrary to the examiner's position that all elements are disclosed in the Hasegawa *et al.* reference, the latter reference does not disclose *biasing the coil* with a bias power that includes *selectively powering* the coil at least once *during formation of the layer* with a *bias waveform to tune stress characteristics* of the layer to have at least one portion with a tensile different from another portion as recited in claim 33. In contrast, Hasegawa *et al.* discloses a typical magnetron plasma sputtering apparatus as opposed to that which is claimed.

Therefore, the rejection is not supported by the Hasegawa *et al.* reference and should be withdrawn. Claim 33 is allowable. Dependent claims 34 and 37 depend from and further limit independent claim 33, and therefore are allowable as well.

With respect to claims 48, to sustain this rejection the Hasegawa *et al.* reference must contain all of the above claimed elements of the respective claim. However, contrary to the examiner's position that all elements are disclosed in the Hasegawa *et al.* reference, the latter reference does not disclose *biasing a coil of the chamber* with a bias power, wherein *biasing the coil* with the bias power includes *selectively powering* the coil at least once *during formation of the layer* with a *bias waveform to tune stress characteristics* of the layer to have at least one portion with a tensile different from another portion as recited in claim 48. In contrast, Hasegawa *et al.* discloses a typical magnetron plasma sputtering apparatus as opposed to that which is claimed.

Therefore, the rejection is not supported by the Hasegawa *et al.* reference and should be withdrawn. Claim 48 is allowable. Dependent claims 49 depends from and further limits independent claim 48, and therefore is allowable as well.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 35 and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hasegawa *et al.* in view of Armstrong *et al.* (U.S. Patent No. 5,482,612).

This rejection is traversed for at least the following reasons. As indicated herein above, claims 34 and 49 are allowable. Dependent claims 35 and 50 depend from and further limit corresponding dependent claims 34 and 49, and therefore are allowable as well.

Claims 36, 52 and 53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hasegawa *et al.* in view of Douglas (U.S. Patent 4,999,320).

This rejection is traversed for at least the following reasons. As indicated herein above, claims 33 and 48 are allowable. Dependent claims 36, 52 and 53 depend from and further limit corresponding independent claims 33 and 48, and therefore are allowable as well.

Claims 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hasegawa *et al.* in view of Uzoh *et al.* (U.S. Patent No. 6,140,234).

This rejection is traversed for at least the following reasons. As indicated herein above, claim 33 is allowable. Dependent claims 45 and 46 depend from and further limit independent claim 33, and therefore are allowable as well.

Claims 47 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hasegawa *et al.* in view of Moslehi U.S. Patent No. 6,132,805).

This rejection is traversed for at least the following reasons. As indicated herein above, claims 33 and 49 are allowable. Dependent claims 47 and 51 depend from and further limit corresponding independent claim 33 and dependent claim 49, and therefore are allowable as well.

New claims 54-57 have been added to provide for a more complete claim coverage. New dependent claims 54-57 depend from and further limit corresponding allowable independent claims 33 and 48, and are allowable as well.

Conclusion

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

The Applicants believe that the subject application, as amended, is in condition for allowance. Such action is earnestly solicited by the Applicants. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, it is requested that the Examiner telephone the undersigned at the number indicated below.

Accordingly, this application is believed to be in proper form for allowance and an early notice of allowance is respectfully requested.

If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is hereby authorized to credit or debit Deposit Account 502117, Motorola, Inc..

Respectfully submitted,

SEND CORRESPONDENCE TO:

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